KENWOOD

HAM CARDIOID DYNAMIC MICROPHONE

MC-50

INSTRUCTIONS MANUAL

The MC-50 has been designed expressly for amateur radio operation as a high-performance microphone, and will match all Trio-Kenwood Amateur Equipment. A splendid addition to your shack, the base unit "Piano key" switches provide easy, smooth switching between transmit and receive. The base is die-cast zinc, providing the weight necessary to make the MC-50 stay put even at contest speeds.

SPECIFICATIONS

Configuration	Dynamic microphone with push-to-talk circuit.
Element	Moving coil type, unidirectional.
Impedance	Dual ratings: Hi-Z 50 k ohm ± 30% (at 1000Hz) Lo-Z 600 ohm ± 30% (at 1000Hz) Selectable: Connector "A" switching
Sensitivity	–56dB ± 3dB/50 k ohm –76dB ± 3dB/600 ohm (0dB=1V/μbar, 1000Hz)
Frequency response	150Hz to 10KHz (–6dB)
Recommended Operation Distance to mic.:	10CM (4") Minimum Distance

OPERATION

The "Piano key" switches provide flexibility in send-receive switching. There are two keys; one for push-to-talk, and the other for Lock Key function. To lock the transmitter ON, press the Lock key. Pressing again returns the system to receive.

INSTALLATION

Impedance Selection.

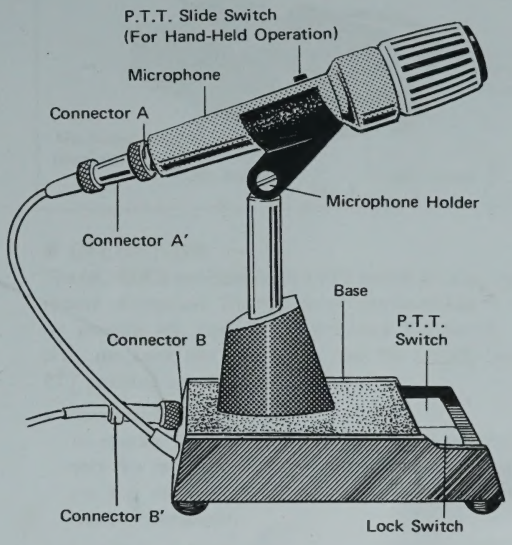
The microphone mounted male connector A is imprinted with a RED H (Hi-Z) and a BLACK L (Lo-Z).

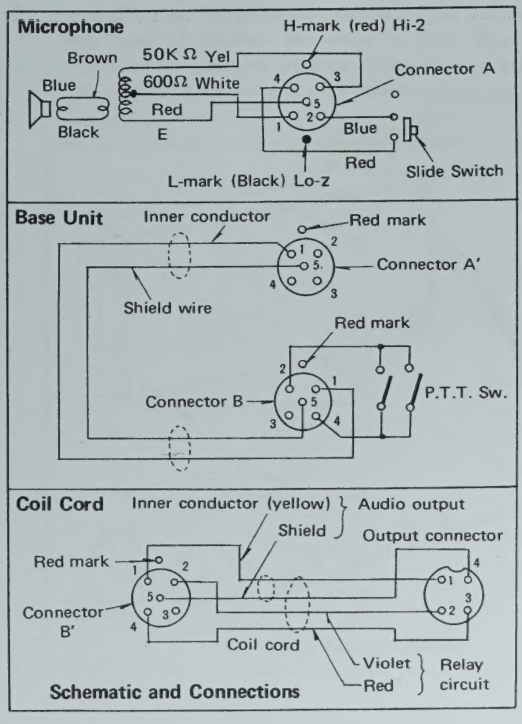
For Hand Held operation, align the Coil Cord connector B' with the appropriate H or L marker. Use the Slide Switch for P.T.T. operation.

For Base mounted operation, align connector A' RED marker with the appropriate H or L marker. When Base-mounted, the Microphone Slide P.T.T. Switch is in-operative-use the Key Switches.

Join the Coil Cord 5 pin female connector B' to the Base 5 pin male connector B so the RED markers align.

Connect the Coil Cord 4 pin female connector to your transceiver.





Schematic and Connections

A product of
TRIO-KENWOOD CORPORATION
17-5 2-chome shibuya shibuya-ku Tokyo 150 Japan

Distributed by
TRIO-KENWOOD(AUSTRALIA)PTY. LTD.
4E Woodcock Place, Lane Cove N.S.W. 2066, Australia

COMMUNICATIONS MICROPHONE

MC-60A

INSTRUCTION MANUAL

■ FEATURES

The MC-60A microphone is designed expressly for use with your amateur communication system. It provides excellent performance when used with any KENWOOD transceiver, thereby upgrading your existing system.

The zinc die-cast base offers high stability, and is complete with a feather-touch PTT switch, rocker UP/DOWN switch, an impedance selector switch and a built-in preamplifier.

NOTE: For UP/DOWN switch operation, refer to your transceiver's manual.

CAUTION:

1. The microphone is constructed of precision parts. Do not open the microphone, as it may result in serious damage.
2. The microphone is sensitive to shock and vibration. Treat it gently.

■ INSTALLATION

1. Battery Installation (Fig. 2)

1. Remove four screws as shown.
2. Install two alkaline AA cells (not NiCd). Observe polarity.
3. Reassemble base unit.

NOTE: 1. Radios with power available at the mic connector (for autopatch microphones) will not require batteries.

2. The preamp on/off switch is located on the underside of the base unit. The preamp is on in the forward switch position.

2. Connection to your transceiver.

1. Slide the microphone into the plastic bracket.
2. Connect the short base mounted cable to the rear of the microphone.
3. Connect the retractile cord from the base to the transceiver.
4. The microphone may also be used separate from the base unit, by connecting the retractile cord directly to the mic. However, the preamp is located in the base unit. Preamped operation is not possible with a direct transceiver hookup.
5. The MC-60A is supplied with a standard PG-4C 8 pin to 8 pin retractile cord. For radios with a four pin mic connector, use a PG-4A (4 pin to 8 pin) option cord. For radios with a six pin mic connector, use a PG-4B (6 pin to 8 pin) option cord.

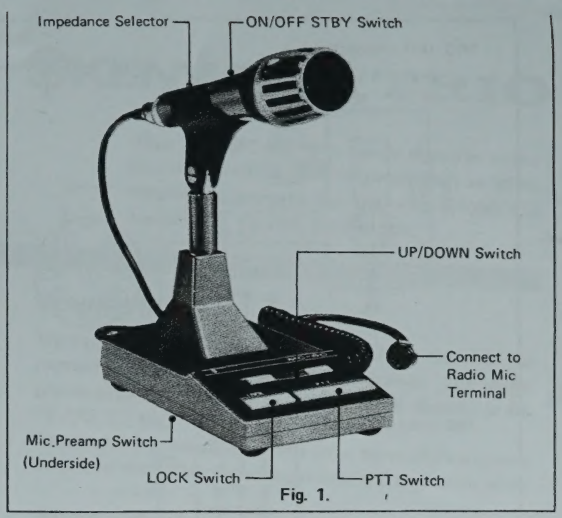


Fig. 1.

■ OPERATION

The MC-60A is equipped with a PTT switch for easy transmit/receive changeover. The PTT switch can be locked, if desired by pressing the Lock key. To unlock the switch, simply press the Lock key once again. The Mic on/off, Lock, and PTT switches are all in parallel.

- **Connection**
  To operate the microphone without using the stand, connect the retractile cord directly to the microphone, and use the slide-switch on the microphone for transmit/receive changeover.

- **Impedance selection**
  The microphone impedance is selectable between 500Ω and 50kΩ by using the slide-switch on the microphone regardless of whether the stand is used. Most Trio-Kenwood HF products are 50kΩ. Some will operate from 500–50kΩ. All VHF and UHF mobile radios are 500Ω impedance.

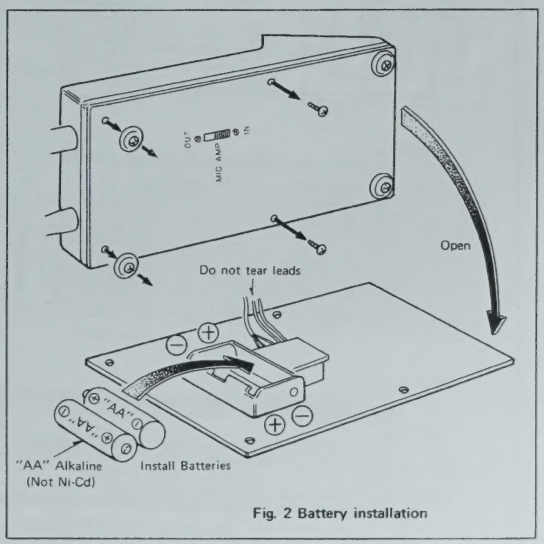
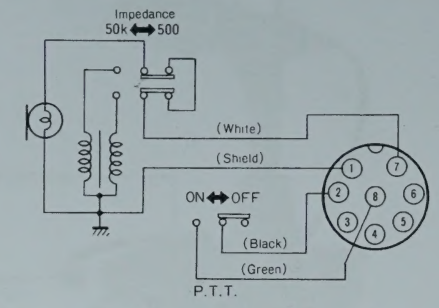
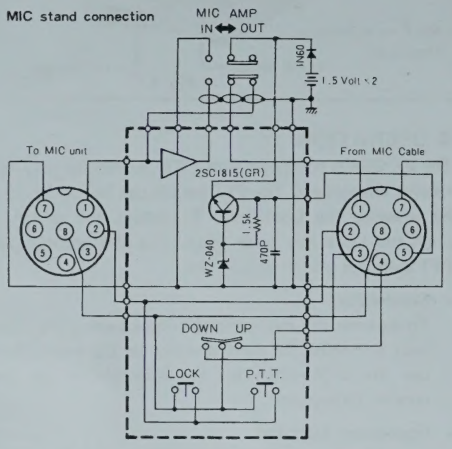


Fig. 2 Battery installation

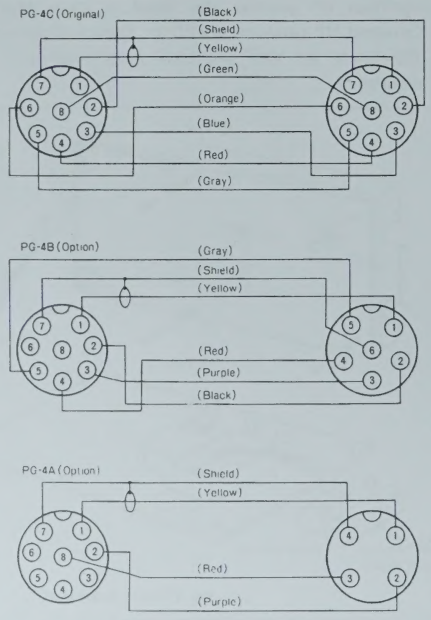
MIC unit connection



MIC stand connection



MIC cable connection



- **UP/DOWN switch**
  The UP/DOWN switch on the base is used to select the transceiver's operating frequency.
- **Microphone Preamp**
  This microphone may be used with any Trio-Kenwood radio. It is intended especially for FM and SSB mobile radios. The preamp is controlled by the bottom mounted switch on the base unit. Sliding the switch forward places the preamp on. Sliding the switch to the rear bypasses the preamp and disconnects the batteries. With the preamp switch on, power is always on so the microphone may be used with VOX operated equipment.
  NOTE: To conserve battery power, turn the preamp off when not in use. (The amplifiers draw approximately 1 ma.)

■ SPECIFICATIONS

Type:	Communication type dynamic microphone with PTT circuit.
Element:	Moving coil type, unidirectional
Impedance:	Dual impedance (1000 Hz) 50 kΩ± 30%, 500 Ω± 30% slide switch selectable
Sensitivity:	(0 dB = 1V/μ BAR, 1000 Hz)
Microphone	−54.5 dB ± 3dB/50 kΩ −71.0 dB ± 3dB/500Ω
Preamp out	−56.0 dB ± 3dB/50kΩ −71.0 dB ± 3dB/500Ω
Preamp in	−50.5 dB ± 3dB/50kΩ −59.0 dB ± 3dB/500Ω
Frequency response:	
Microphone, or Preamp off	150 Hz – 10 kHz (−6 dB)
Preamp in	200 Hz – 7 kHz (−6 dB)
Recommended operating distance to mic.:	10 cm (4") minimum

KENWOOD CORPORATION
Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan
KENWOOD U.S.A. CORPORATION
P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745, U.S.A.
KENWOOD ELECTRONICS DEUTSCHLAND GMBH
Rembrücker Str. 15, 6056 Heusenstamm, West Germany
KENWOOD ELECTRONICS BENELUX N.V.
Mechelsesteenweg 418 B-1930 Zaventem, Belgium
KENWOOD ELECTRONICS AUSTRALIA PTY. LTD.
(INCORPORATED IN N.S.W.)
4E. Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD/TRIO

MC-42S

INSTRUCTION MANUAL

Your new MC-42S is a handy dynamic microphone with UP/DOWN frequency shift switches, specifically designed for use with KENWOOD transceivers, TS-780, TS-660, etc.

FEATURES

1. **Microphone with UP/DOWN micro switches**
   Transmit frequency can be selected by the UP/DOWN switches on the microphone. This special feature is particularly useful for operation of KENWOOD transceivers, TS-780, TS-660, etc.
2. **Optimum tone quality for communication use**
   The microphone element frequency response has been carefully selected to provide high intelligibility and clear tone, which are indispensable for transceive operation.
3. **Easy operation and high reliability**
   Designed on the basis of human engineering to ensure easy, fatigue-free operation.
   The UP/DOWN switches can be operated while holding the microphone.
   The PTT micro switch also assures easy and reliable operation.

NOTE:

1. For UP/DOWN operation switch, refer to the instruction manual for your transceiver.

CAUTION:

1. This microphone has a precision mechanism. Do not attempt to disassemble or modify the microphone, as it may result in deterioration of performance.
2. The microphone is very sensitivie to mechanical shock. Handle it gently, and do not tap or drop it.

SPECIFICATIONS

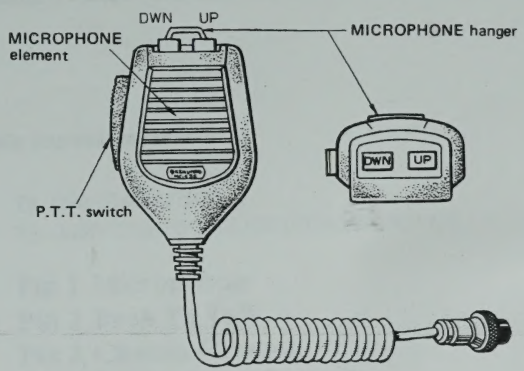
Type:	Dynamic microphone
Input impedance:	500 ohms ±30%
Sensitivity:	−69 dB ±3 dB (at 1000 Hz, 2 cm from MIC head)
Directivity:	Omni-directional
Dimensions:	W53 x H82 x D33.5 W53 x H113 x D37 (projections included)
Weight:	190 g (with cord)

CONNECTION

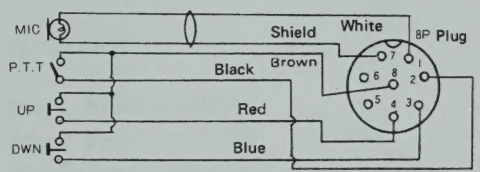
Microphone input impedance is 500 ohms. Connect the microphone to a low impedance transceiver. The microphone cord with 8P plug can be connected directly to the TS-780, TS-660.

When using the microphone with other types of transceivers, be sure to check that the wiring system and connector agree.

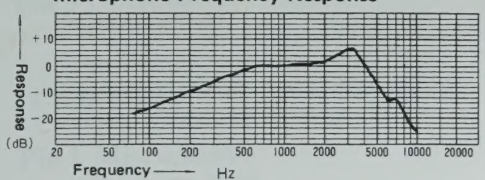
Nomenclature



Wiring Diagram



Microphone Frequency Response



A product of
TRIO-KENWOOD CORPORATION
17-5, 2-chome, Shibuya, Shibuya-ku, Tokyo 150, Japan

TRIO-KENWOOD COMMUNICATIONS, INC.
1111, West Walnut Street, Compton, California, 90220, U.S.A.

TRIO-KENWOOD COMMUNICATIONS, GmbH
D-6374 Steinbach TS, Industriestrasse 8A, West Germany

TRIO-KENWOOD (AUSTRALIA) PTY. LTD.
30 Whiting Street, Artarmon, Sydney N.S.W. Australia 2064

 PRINTED IN JAPAN B50-3969-08

KENWOOD

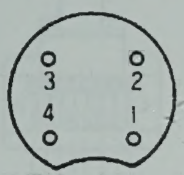
Amateur Radio Division

Subject: Miscellaneous Connectors **Date:** January 26, 1999

Microphone Connectors

Pin Numbers Usually Imprinted in Insulator

4 Pin Microphone Plug



TR-7200A/7400A/7500
TS-120S/130S/180S/511S/520/530/600/700/820/830

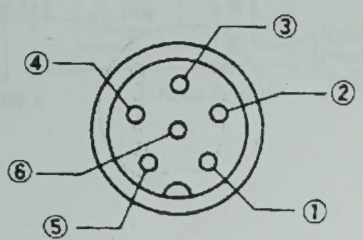
Pin 1 Microphone
Pin 2 Push To Talk
Pin 3 Chassis Ground
Pin 4 Microphone Ground

5 Pin Microphone Plug

TR-7600/7625

Pin 1 Microphone
Pin 2 Push To Talk
Pin 3 No Connection
Pin 4 Chassis Ground
Pin 5 Microphone Ground

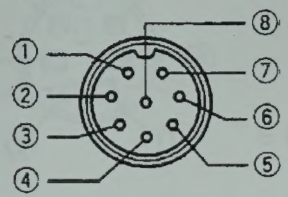
6 Pin Microphone Plug



TR-7730/7800/7850/7930/7950/8400/9000/9130/9500

Pin 1 Microphone
Pin 2 Push To Talk
Pin 3 Down
Pin 4 Up
Pin 5 8VDC (150ma Max) Or N.C.
Pin 6 Chassis Ground

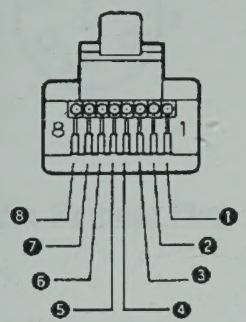
8 Pin Microphone Plug



TM-201A/201B/211/221/231/241/321/331
TM-401A/401B/421/431/441/521/531/541
TM-621/631/701/721/731/2530/2550/2570
TR-50/751/851
TS-50/60//140/430/440/450/570/660/670/680
TS-690/711/780/811/850/870/930/940/950
TW-4000/4100

Pin 1 Microphone
Pin 2 Push To Talk
Pin 3 Down
Pin 4 Up
Pin 5 8VDC (150ma Max)
Pin 6 RX Audio (Some Models)
Pin 7 Microphone Ground
Pin 8 Chassis Ground

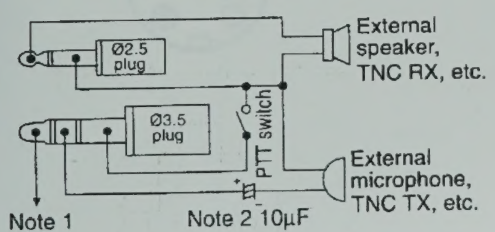
8 Pin Modular Microphone Plug



TM-251/255/261/451/455/461/641
TM-642/732/733/741/742/941/942
TM-G707/V7A

Pin 1 Up
Pin 2 8VDC (150ma Max)
Pin 3 Chassis Ground
Pin 4 Push-To-Talk
Pin 5 Microphone Ground
Pin 6 Microphone
Pin 7 RX Audio (Some Models)
Pin 8 Down

Speaker/Microphone Connection



TH-21AT/21BT/22/25/26/27/28/31AT/31BT
TH-41AT/41BT/42/45/46/47/48/55/75/77
TH-78/79/D7/G71/205/215/225/235/315/415

2.5mm Plug

1 Tip	**Speaker**
2 Sleeve	**Speaker & PTT Ground**

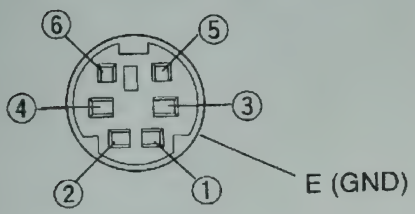
3.5mm Plug

1 Tip	**No Connection**
2 Ring	**Microphone**
3 Sleeve	**PTT**

Accessory and Data (Packet) Connectors

Pin Numbers Usually Imprinted in Insulator

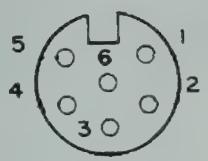
6 Pin Data Plug



TM-251/451/G707/V7

Pin 1 Data Input (Microphone)
Pin 2 Ground (Mic Ground)
Pin 3 Packet Standby (PTT)
Pin 4 9600bps RX Audio Output
Pin 5 1200bps RX Audio Output
Pin 6 Squelch Control Output
Shell Earth (Ground)

6 Pin ACC Plug



TS-450/690/570/850/870/950

Pin 1 GND Signal Ground
Pin 2 TXD Transmit Data
Pin 3 RXD Receive Data
Pin 4 CTS Transmit Enable
Pin 5 RTS Receive Enable
Pin 6 No Connection
Shell Earth (Ground)

7 Pin Remote Plug

TS-120/130/140/180/430/440/450/530/570
TS-680/690/830/850/870/940/950

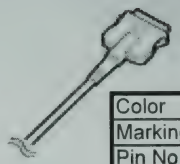
Pin 1 Speaker Output
Pin 2 Relay Common (Ground)
Pin 3 PTT for Footswitch
Pin 4 Relay Close On Transmit
Pin 5 Relay Open On Transmit
Pin 6 ALC Input
Pin 7 12VDC On Transmit (10ma Max)
Shell Earth (Ground)

13 Pin ACC 2 Plug

TS-140/440/450/680/690/570/711/790/811/850
TS-870/940/950

(Rear Panel view)

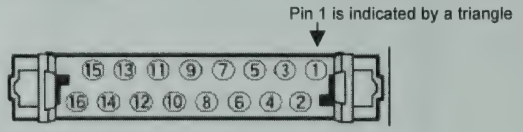
Pin 1 N/C
Pin 2 N/C
Pin 3 RX Audio Output
Pin 4 Shield For Pin 3
Pin 5 Squelch Control Or N/C
Pin 6 S-Meter Output Or N/C
Pin 7 N/C
Pin 8 Chassis Ground
Pin 9 PTT (Standard Mic Input is Muted)
Pin 10 N/C
Pin 11 Microphone Input
Pin 12 Shield for Pin 11
Pin 13 PTT (Standard Mic Input is Active)
Shell Earth (Ground)



VC-H1 Wire Connections Using Optional Cable E30-3352-08

Color	Orange	Orange	Yellow	Yellow	White	White	Gray	Gray	Pink	Pink	Shield
Markings	Red	Black	Red	Black	Red	Black	Red	Black	Red	Black	Shield
Pin No.	4	5	6	7	8	9	11	13	14	15	16

Note: Pins 1, 2 and 10 are not connected. Pins 3 and 12 are jumpered.



VC-H1 Connections for SSTV and speaker microphone

Wire Color	VCH1 Pin No.		
Orange/Red	4	→	Chassis Ground
Shield	16		
Yellow/Black	7	→	PTT
Gray/Red	11		
Pink/Red	14	→	Audio Input (Microphone)
White/Black	9	→	Audio Output **
Gray/Black	13		

VC-H1 Connections for SSTV

Wire Color	VCH1 Pin No.		
Orange/Red	4	→	Chassis Ground
Shield	16		
Yellow/Black	7	→	PTT
White/Red	8	→	Audio Input (Microphone)
White/Black	9	→	Audio Output **

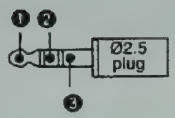
VC-H1 Connections for TS-570/TS-870

Wire Color	VCH1 Pin No.		
Orange/Red	4	→	8 Chassis Ground
Yellow/Black	7	→	9 PTT
Yellow/Red	8	→	11 Audio Input
White/Black	9	→	3 Audio Output
Shield	16	→	12 Shield 4

** A 47uf 16v capacitor may be needed to avoid audio distortion

Specialized Connections and Cables

TH-D7A



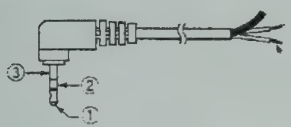
GPS Connection
2.5mm Plug

1 Tip	To RXD on GPS
2 Ring	To TXD on GPS
3 Sleeve	Ground

PC Connection
2.5mm Plug

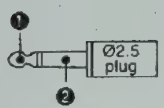
1 Tip	To RXD on PC
2 Ring	To TXD on PC
3 Sleeve	Ground

Supplied Cable Part No E30-3374-05



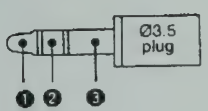
1 White	RXD On GPS
2 Red	TXD On GPS
3 Shield	GND On GPS

VC-H1



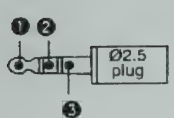
Video Output Plug
2.5mm Plug

1 Tip	Video Signal
2 Sleeve	Ground



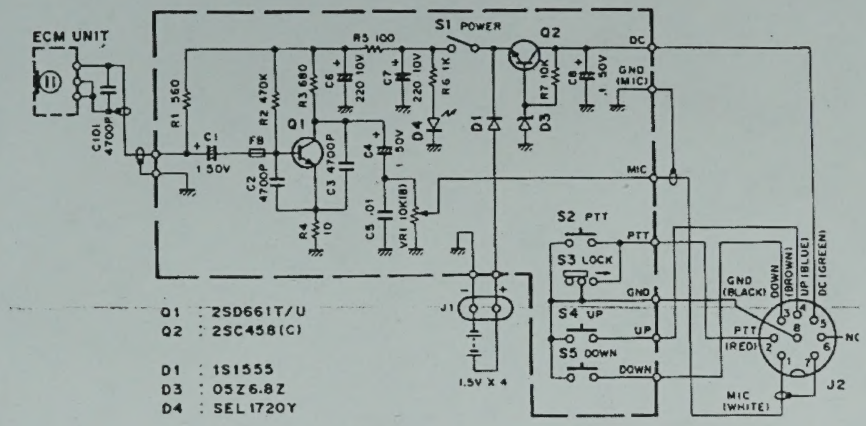
Video Input Plug
3.5mm Plug

1 Tip	N/C (For VC-H1 Camera ONLY)
2 Ring	Video Signal
3 Sleeve	Ground



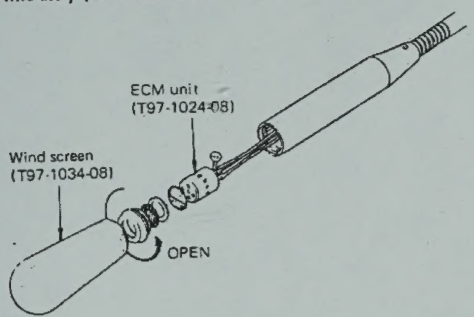
Com Jack Connection
2.5mm Plug

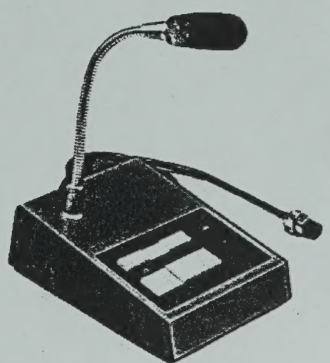
1 Tip	To RXD on PC
2 Ring	To TXD on PC
3 Sleeve	Ground



MC-80 DISASSEMBLY

Mic ass'y (T91-0339-08)





MC-80 SPECIFICATIONS

Type	Ominidirection electret condenser microphone
Impedance	Approx. 700Ω
Sensitivity	−40dB±6dB (VR MAX)
Frequency response	200−700Hz
Power supply	6V ("AA" batteries 1.5V x 4) Batteries not supplied.
Current consumption	Approx. 10mA (Batteries can be used more than 500 hours)
Weight	Approx. 700g (1.5lbs)

Ken MC-80 mike

336-242-8150

Schematic

SECTION 2 INSIDE VI

- MAIN AND RF UNITS